

## 3.0 Watershed Organization and Operations

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This section describes how the Elm Creek Watershed Management Commission is organized, its purpose and authorities, and its various operating programs under its current Watershed Management Plan. The section concludes with an assessment of progress towards meeting the goals in the current watershed management plan.

### 3.1 ELM CREEK WATERSHED MANAGEMENT COMMISSION

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#### 3.1.1 Purpose and Authority

The Elm Creek Watershed Management Commission (EC WMC) was formed on February 1, 1973, under a Joint Powers Agreement developed under authority conferred to the member communities by Minnesota Statutes 471.59. The parties to that JPA were Champlin, Corcoran, Dayton, Maple Grove, Medina, Plymouth, and Hennepin Conservation District. In 1981 Hassan Township entered the agreement. The cities of Greenfield and Rogers became non-voting, non-paying members of the Commission in 1982. In 2000 Rogers became a full member of the Commission and the City of Corcoran withdrew from the Pioneer-Sarah Creek Commission in order to include all of its area under the Elm Creek Commission. The following year the City of Greenfield voted to withdraw from the Elm Creek Commission and to include all its area in the Pioneer-Sarah Creek Watershed Management Commission. Hassen was fully annexed by Rogers in 2012.

The Commission's purpose is set forth in Minnesota Statutes 103B.210, Metropolitan Surface Water Planning, which codified the Metropolitan Surface Water Management Act of 1982. Minnesota Statutes 103B.231 and Minnesota Rules 8410 establish requirements for watershed management plans within the Twin Cities Metro Area. The law requires the plan to focus on:

- (1) protecting, preserving, and using natural surface and groundwater storage and retention systems;
- (2) minimizing public capital expenditures needed to correct flooding and water quality problems;
- (3) identifying and planning for means to effectively protect and improve surface and groundwater quality;
- (4) establishing more uniform local policies and official controls for surface and groundwater management;
- (5) preventing erosion of soil into surface water systems;
- (6) promoting groundwater recharge;
- (7) protecting and enhancing fish and wildlife habitat and water recreational facilities; and
- (8) securing the other benefits associated with the proper management of surface and ground water.

#### 3.1.2 Governance

The Elm Creek Watershed Management Commission is governed by a seven-member board comprised of representatives who are appointed by each City Council for a term determined by the city. The Commission currently meets monthly, holding a meeting on the second Wednesday of

each month. Meetings are open to the public. The Joint Powers Agreement setting forth the authorities granted to the Commission is included in Appendix A.

## **3.2 RESPONSIBILITIES**

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### **3.2.1 Commission**

A Board of Commissioners has been established as the governing body of the Commission. A Technical Advisory Committee (TAC) comprised of member city staff designees meets as requested by the Commission. There is no standing Citizens Advisory Committee.

Operating expenses are funded through an annual apportionment to each city based on their proportionate share of taxable market value of real property within the watershed. These expenses include the cost of technical, administrative, and legal services; programs such as water quality monitoring, public information and education, and special studies; and matching funds for grant-funded projects and studies. The Commission's mechanisms for funding capital improvements are identified in the current Joint Powers Agreement and policies adopted by the Commission.

The Commission cannot directly levy taxes or special assessments but has the ability to assess members who subsequently decide how they want to generate the funds. Options available to the members include *ad valorem* tax, creation of a watershed management tax district, special assessments, or Chapter 444 storm sewer utility financing. The Commission may also request bonding from Hennepin County. In 2012 the Commission adopted an amendment to the Second Generation Plan that revised the Capital Improvement Program (CIP), and adopted a policy to contribute up to 25 percent of the cost of a qualifying project.

### **3.2.2 Relationship to Other Agencies**

*Cities.* Member cities all have approved stormwater management plans that assist the Commission in implementing the Second Generation Watershed Management Plan. The cities have in place ordinances codifying the Commission's development rules and standards, including stormwater management, erosion control, and wetland and floodplain management. City stormwater management programs vary by community, depending on fiscal capacity, degree of development, and water resources.

All the member cities except Rogers are National Pollutant Discharge Elimination System (NPDES) Municipal Separate Small Storm Sewer Systems (MS4s) and have approved NPDES permits and Stormwater Pollution Prevention Programs (SWPPPs) that include numerous activities to manage stormwater and prevent water resource degradation. Those SWPPPs also contain TMDL implementation actions to reduce pollutant loading and manage the rate and volume of stormwater runoff.

The Joint Powers Agreement does not authorize the Commission to directly contract for capital improvement projects. The Commission may order capital projects for construction by member cities, often as regional projects which several cities may agree to cooperatively construct and fund.

In addition to Commission projects member cities may undertake projects, such as including BMPs in routine street reconstruction projects.

Member cities also engage in various water management-related activities such as Adopt-A-Park programs, urban forestry and Arbor Day activities, promotion of recycling and composting, and environmental education published in the city newsletter and website. In many cities the Park Commission or some other Commission is charged with providing advice to the City Council on environmental matters, including watershed related matters.

*Hennepin County.* The Hennepin County Environment and Energy Department (HCEED) operates a number of programs to conserve natural and water resources in the county. Educational and outreach services are focused on proper lawn and garden care, proper use of herbicides and pesticides, and composting; assistance to communities in identifying and conserving high-value natural resources; promotion of and assistance with agricultural best management practices; and managing public accesses to water resources. HCEED technical staff provide technical services to the Commission under a contract between the Commission and the County.

The County also participates in the education and outreach programming coordinated by the West Metro Water Alliance (WMWA) consortium of watershed management organizations in west Hennepin County.

In addition, HCEED operates volunteer education and monitoring programs, including the RiverWatch stream macroinvertebrate monitoring program for elementary and secondary school students, Stream Health Evaluation Program (SHEP) for adult volunteers, and the Wetland Health Program (WHEP), also for adult volunteers. The HCEED is responsible for administration and implementation of the Minnesota Wetlands Conservation Act and of cost-share conservation programs that financially assist landowners with the protection of their land, and administers conservation easements.

The Hennepin County Public Health Department administers permitting and inspection of residential and commercial Subsurface Sewage Treatment Systems in most of the member cities.

*Metropolitan Council.* The Metropolitan Council's *Water Resources Management Policy Plan* spells out a wide range of programs and activities undertaken by a variety of governmental and private agencies for management of water resources in the Metro area. Among the many programs and activities are several of particular interest to the Commission: the development of targeted watershed pollutant loads; review of watershed and local water plans and comprehensive plans for consistency with Metro goals and objectives; grant programs; the Citizens' Assisted Lake Monitoring Program (CAMP); and the Environmental Information Management System. The Elm Creek Commission has regularly partnered with the Metropolitan Council's CAMP program of citizen volunteer lake water quality monitoring since 2005, although a few lakes were occasionally monitored back to 1998.

*Minnesota Pollution Control Agency.* The MPCA operates several programs applicable to watershed planning. The MPCA monitors water quality, sets standards, and implements various controls. Of particular interest are the National Pollutant Discharge Elimination System (NPDES) program and

implementation of the Clean Water Act. The MPCA manages the NPDES Phase I construction and industrial stormwater discharge permitting. MPCA also manages the NPDES Phases I and II permitting for municipal separate storm sewer systems (MS4s). Hennepin County and Mn/DOT are also MS4s with conveyances in the Elm Creek watershed.

The MPCA implements the Clean Water Act's requirement that states adopt water quality standards to protect the nation's waters. The Environmental Protection Agency (EPA) and MPCA assists managers of water resources that have lakes and streams that fail to meet these established standards to prepare a Total Maximum Daily Load (TMDL) study identifying the source of the pollutant and a plan for bringing the water resource into compliance.

The Elm Creek Commission worked closely with the MPCA and received funding from that agency to complete a Watershed Restoration and Protection Strategy (WRAPS) study for several lake and stream impairments in the watershed that is expected to be complete by the end of 2015.

*Board of Water and Soil Resources.* The board is the state's administrative agency for 90 soil and water conservation districts, 46 watershed districts, 23 metropolitan watershed management organizations, and 80 county water managers. BWSR's core functions include implementing the state's soil and water conservation policy, comprehensive local water management, and the Wetland Conservation Act (WCA). BWSR periodically assesses watershed organizations as part of its Performance Review and Assistance Program (PRAP).

BWSR wetland specialists participate in Technical Evaluation Panels in the watersheds to assess potential wetland impacts and mitigation strategies. BWSR also periodically audits the Commissions to assure that WCA is being administered properly. Finally, BWSR is the implementation agency for the Clean Water Funds grant program funded by the Clean Water, Land, and Legacy Amendment.

*Minnesota Department of Agriculture.* The MDA is statutorily responsible for the management of pesticides and fertilizer other than manure to protect water resources. The MDA implements a wide range of protection and regulatory activities to ensure that pesticides and fertilizer are stored, handled, applied and disposed of in a manner that will protect human health, water resources and the environment. The MDA works with the University of Minnesota to develop pesticide and fertilizer BMPs to protect water resources, and with farmers, crop advisors, farm organizations, other agencies and many other groups to educate, promote, demonstrate and evaluate BMPs, to test and license applicators, and to enforce rules and statutes. The MDA has broad regulatory authority for pesticides and has authority to regulate the use of fertilizer to protect groundwater.

*Minnesota Department of Health.* The Environmental Health Division of the MDH operates many programs of interest to the Commissions. Programs include Drinking Water Protection, Wellhead Protection, Lake and Fish Monitoring (in partnership with DNR/MPCA), Environmental Health Services, Health Risk Assessment, Site Assessment, and Consultation and Well Management.

*Minnesota Department of Natural Resources.* The DNR manages and protects the state's natural resources and operates numerous programs. The department provides technical assistance and information regarding best management practices, natural resource management, incorporating natural resource conservation in land use planning, and lakescaping.

The Fisheries Division monitors and improves fisheries within the state including many of the lakes within the watershed. It also promotes fishing opportunities and provides grants to assist in the construction of fishing piers. The Ecological and Water Resources (EWR) Division focuses on an overarching vision of “Healthy Watersheds throughout Minnesota.” “Healthy Watersheds” include: 1) sustainable quantities and qualities of water; 2) sustainable levels of biodiversity; 3) well-functioning ecosystem services; and 4) sustainable and vibrant natural resource economies and recreational opportunities. The EWR Division also provides the following services:

- It maintains an inventory of public waters and operates permit programs for working in public waters or for appropriating public waters;
- Oversees the state’s floodplain management program;
- Provides local stewardship by coordinating the Mississippi River Critical Area and MNRAA programs and the Shoreland Management program;
- Collects, analyzes, and provides ecological information, including:
  - Location and management of rare resources (endangered and threatened species, critical habitats, high quality natural communities);
  - Management of harmful exotic species, fish and wildlife diseases, and negative environmental impacts of human development;
  - Management and restoration of important ecological processes in river systems and key natural areas; and
  - Development of information about Minnesota's ecosystems and their significance to a sustainable quality of life.

The DNR’s webpage at [www.dnr.state.mn.us/lakefind/index.html](http://www.dnr.state.mn.us/lakefind/index.html) is LakeFinder, a DNR supported tool that combines information from various DNR Divisions, as well as other state agencies, such as Minnesota Pollution Control Agency (water quality) and Minnesota Department of Health (fish consumption). This tool contains data for more than 4,500 lakes and rivers throughout Minnesota.

The DNR also provides a variety of specialized programs oriented to property owners or neighborhood groups, such as the Aquatic Plant Management, Urban Fisheries and Fishing in the Neighborhood, Neighborhood Wilds, and Metro Greenways programs.

### **3.3 OPERATIONS**

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This section describes the current programs operated by the Elm Creek Watershed Management Commission.

#### **3.3.1 Education and Outreach**

The Commission initially established an Education Program as part of its Second Generation Plan. The Commission later joined the joint Education and Public Outreach Committee (EPOC) of the Bassett Creek, Pioneer-Sarah Creek, Shingle Creek and West Mississippi Commissions and Blue Thumb. These organizations, along with Three Rivers Park District, Hennepin County Department of Environmental Services and the Freshwater Society, then formally formed the West Metro Water

Alliance (WMWA) and developed the West Metro Education and Outreach Plan (EOP) to guide shared activities.

Details regarding the education and outreach activities may be found in the Commission's Annual Report. Some highlights over the past ten years are:

- Maintained a website - [www.elmcreekwatershed.org](http://www.elmcreekwatershed.org) - to provide news to residents of the watershed and beyond. The Watershed Management Plan, monthly meeting materials, project reviews, Annual Reports, water monitoring results, and other watershed-related information are posted there.
- Provided news releases to the member cities and their official newspapers for publication
- Participated in a professional survey of watershed knowledge conducted in 2007 in the Elm Creek, Bassett Creek, Shingle Creek, and West Mississippi watersheds.
- Participated in developing the brochure *Ten Things You Can Do to Improve Minnesota's Lakes and Streams*. 8,500 copies were distributed to the member cities.
- Promoted river stewardship through the River Watch program. Under the guidance of the Hennepin County Department of Environmental Services (HCDES), students from various schools have regularly monitored two sites on Rush Creek and two to three sites on Elm Creek since 1998. Some additional sites on Elm Creek have also been periodically monitored.
- Cosponsored rain garden workshops through Metro Blooms.
- Awarded a \$1,000 water quality education grant to Kaleidoscope Charter School to purchase two compound microscopes to enhance water quality education. The school regularly participates in the RiverWatch macroinvertebrate monitoring program.
- Participated in a 2011 workshop series. The WMWA in partnership with the Freshwater Society developed and presented a series of three workshops in 2011 aimed at educating City Councils, Planning Commissions, Parks and other Commissions, and city staff about water quality issues. The workshops focused on runoff volume management, water quality, and TMDLs and management planning. Sixty-five individuals attended, including city councilors, city officials, advisory commission members, lake association representatives, agency staff, and interested private citizens. Twenty-two cities and 14 agencies/associations/citizens were represented.

### **3.3.2 Monitoring Program**

Minnesota Administrative Rule 8410.0100 Subp. 5 requires watershed management organizations to conduct monitoring programs "capable of producing accurate data to the extent necessary to determine whether the water quality and quantity goals of the organization are being achieved." Flow and water quality are routinely monitored at one site on Elm Creek, and five lakes have been routinely monitored with other lakes monitored on a rotating schedule. Flow and water quality data on the other major streams and other stations on Elm Creek as well as additional lake monitoring data was collected as part of the WRAPS study currently under way.

The Commission publishes monitoring data in its Annual Report which presents data from the current year as well as water quality and quantity trends. That trend data is included in this Plan in Appendix B. The following are short descriptions of the current monitoring program.

*Streams.* With cost-share funding from the Commission, the USGS operates a monitoring station on Elm Creek, with flow data available online back to 1978. The Commission started partnering with USGS in 1988 to monitor that site, measuring the following parameters: nitrate, ammonia, nitrate plus nitrite, total nitrogen, organic nitrogen, chloride, total phosphorus, total suspended solids, dissolved oxygen, pH, chemical oxygen demand, conductivity, and temperature.

Student and adult volunteers monitor macroinvertebrates and water chemistry and clarity at sites around the watershed through RiverWatch and Stream Health Evaluation Program, both managed by Hennepin County Environmental Services.

*Lake Monitoring.* The Commission has monitored Fish Lake and Weaver Lake since 1985 and French and Diamond Lakes since 2004. Other lakes have been occasionally monitored. Parameters monitored typically include total phosphorus, soluble reactive phosphorus, total nitrogen, Secchi depth, and chlorophyll-a. In addition, two to three lakes are monitored each year by volunteers through the Citizen Assisted Monitoring program (CAMP), and those parameters include total phosphorus, Secchi depth, and chlorophyll-a as well as general lake usability observations.

### 3.3.3 Rules and Standards and Project Reviews

The Commission does not issue permits but does require development and redevelopment projects to meet requirements for runoff rate control and water quality treatment. The Commission acts as the Local Government Unit (LGU) for Wetland Conservation Act (WCA) administration for Champlin and Corcoran.

Development and redevelopment projects that meet certain size and other criteria are required to incorporate into their developments Best Management Practices (BMPs) sufficient to meet the Commission’s standards. Engineering plans, hydrologic calculations, wetland delineations, and other supporting material is submitted to the Commission’s technical services consultant, who conducts a Project Review and discusses the proposal and any necessary revisions with the developer and the city. Findings are summarized in a report to the Commission, which will either recommend to the city that the plans as submitted or with minor modifications are acceptable, or will recommend to the city that the plans be rejected. It is the responsibility of the city to see that the standards are met. Table 3.1 summarizes the project reviews that have been completed during 2004-2013. These project reviews include private development and redevelopment as well as public projects such as street and highway projects.

**Table 3.1. Project reviews, 2004-2013.**

Year	Project Reviews	Wetland Only	Year	Project Reviews	Wetland Only
2004	84	16	2009	34	6
2005	96	16	2010	37	10
2006	79	21	2011	34	6
2007	62	12	2012	38	5
2008	42	3	2013	54	11
TOTAL				560	106

### 3.3.4 Administration

Administration includes preparing for and attending routine and special meetings; taking minutes and record keeping; grant writing; correspondence; maintaining the web site; providing bookkeeping services; filing; and annual and financial reporting. Administrative and technical consulting staff also administers grants on behalf of the Commission: completing work plans, preparing interim and final reports, and preparing invoices.

## 3.4 ASSESSMENT OF SECOND GENERATION MANAGEMENT PLAN PERFORMANCE

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The Commission has completed or will have completed by 2014 many of the work plan activities and strategies identified in the Second Generation Plan. The most successful achievements of the Second Generation Plan were:

- Routinely monitored Elm Creek and five lakes, with other lakes monitored on occasion.
- Participated in joint education activities as part of the West Metro Water Alliance (WMWA) and Blue Thumb, and offered volunteer monitoring programs as citizen outreach.
- The Second Generation Plan identified stream bank instability as the top priority issue to be addressed by the Commission. In 2005-2007, the Commission undertook the Elm Creek Channel Study, including:
  - Identified unstable areas of Elm, Rush, North Fork Rush, and Diamond Creeks;
  - Determined the bankfull channel capacity at surveyed locations;
  - Undertook scenario modeling to assess the impact of increased watershed imperviousness on overall stream stability under the then-current development rules and standards and various modifications to those requirements;
  - Determined that a 24-hour extended detention of a channel protection volume would adequately protect downstream channels.

Following this study, the Commission adopted a Major Plan Amendment to revise the rules and standards to incorporate a new extended detention requirement.

- To administer the Wetland Conservation Act more effectively, in 2007 the Commission developed the *Wetland Review Process*. This guide includes an overview of wetland requirements, a flow chart showing the review process, a WCA sequencing worksheet, the Commission's performance standards for wetland mitigation, and the Commission's monitoring report requirements.
- In 2007 the Commission received a Surface Water Assessment Grant (SWAG) for the Elm, Rush and Diamond Creek Stream Monitoring Project. This project is a program to monitor Elm Creek, Rush Creek, North Fork Rush Creek, and Diamond Creek at four sites above the confluence of Elm Creek for dissolved oxygen, invertebrate populations, bacteria levels, and pollutant transport (phosphorus, nitrogen, and sediment) and to monitor Weaver, Fish, Diamond, Cowley, Henry and Rice lakes for total phosphorus, total Kjeldahl nitrogen, chlorophyll-a, surface temperature and water transparency. In addition to these parameters, Weaver, Fish, and Diamond Lakes are also monitored for soluble reactive phosphorus, dissolved oxygen,



conductivity, and pH. The data collected will supplement other monitoring data as the Commission undertakes the current WRAPS study.

- In 2009, the Commission requested and received funding from the MPCA to prepare a Watershed-Wide TMDL and Implementation Plan. The MPCA has since renamed these as Total maximum Daily Load (TMDL) studies and Watershed Restoration and Protection Strategies (WRAPS) studies. The TMDL report will set pollution reduction requirements for the impaired streams and lakes in the watershed. The WRAPS document is a summary of the monitoring and assessment, stressor identification, the TMDL reports and includes an implementation table with actions to restore impaired waters and protect waters that are not impaired. The WRAPS is expected to be complete in 2015.
- In 2012 the Commission adopted a major plan amendment revising the Capital Improvement program and adopting a Cost Share Policy.

Areas that fell short of Second Generation expectations or which could be improved include:

- While the Elm Creek Channel Study identified numerous potential capital projects, only one – stabilizing 800 feet of Elm Creek stream through Jo Nunn Park in Champlin – has been completed. An additional project in Champlin - reconstructing the Mill Pond Dam and stabilizing the downstream streambank – is currently scheduled for construction in the next few years.
- The Commission has had limited success persuading agricultural and livestock operations to undertake voluntary phosphorus and sediment load reductions. Modeling completed for the WRAPS indicates that these land uses are sources of pollutant load, including bacteria, phosphorus, and sediment that not only impacts water chemistry and clarity in the lakes and streams, but also impacts the biological communities.
- A goal of the Second Generation Plan was to establish manure management standards and a model ordinance related to manure management, feedlots, and fencing/setback standards for livestock near water bodies. This was not completed. However, other watershed management organizations with agricultural land uses may be interested in collaborating on this as part of WRAPS implementation.